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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,499	03/01/2004	Richard Mapp	53467-5018	7443
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MORGAN LEWIS & BOCKIUS LLP			EXAMINER	
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WASHINGTON, DC 20004				
			ART UNIT	PAPER NUMBER
			3731	
			MAIL DATE	DELIVERY MODE
			06/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/788,499	MAPP, RICHARD
	Examiner	Art Unit
	Amy T. Lang	3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 March 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-29 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 3/16/2007. In particular, claim 1. This combination of limitations was not present in the original claims. Thus, the following action is properly made final.

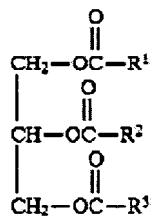
All previous rejections and objections not included in this office action have been withdrawn in light of applicant's amendments filed 3/16/2007.

Response to Arguments

Applicant's arguments filed 3/16/2007 have been fully considered but they are not persuasive.

1. Specifically, applicant argues (A) that the combination of Rayborn and Malchow does not teach the instantly claimed film forming lubricant comprising a triglyceride having one or more fatty acids wherein each fatty acid has from 16 to 26 carbon atoms.

With respect to argument (A), Rayborn discloses the addition of a liquid lubricant, specifically vegetable oil, to a drilling fluid ([0006], [0018]). However, Rayborn fails to specifically disclose the vegetable oil. Malchow also teaches a drilling fluid comprised of vegetable oil (column n1, lines 6-11; column 4, lines 62-63). The vegetable oil is further disclosed as triglyceride having the formula:



where R¹, R², and R³ are unsaturated aliphatic groups each containing from 7 to 23 carbon atoms (column 3, lines 1-13). The preferred fatty acids include linoleic acid, oleic acid, linolenic acid, and ricicoleic acid, which clearly overlap the instant claims (column 5, lines 1-8). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for Rayborn to utilize the vegetable oil of Malchow.

2. Specifically, applicant argues (B) that Adams is not properly combined with Rayborn.

With respect to argument (B), Rayborn discloses a drilling fluid additive comprising vegetable oil ([0003], [0018]). The additive composition is utilized in horizontal drilling ([0005]). However, Rayborn does not specifically disclose the addition of a filming amine. Adams also discloses a drilling fluid additive for horizontal drilling comprising vegetable oil (column 2, lines 1-9). The fluid additive comprises a filming amine, specifically Arcor 233, which acts as a corrosion inhibitor and a carrier for a surfactant and activator (column 1, lines 42-50). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for Rayborn to utilize the filming amine additive of Adams.

3. Specifically, applicant argues (C) that Makino does not disclose a composition consisting essentially of an unsaturated fatty acid.

With respect to argument (C), Rayborn discloses the drilling fluid comprising a liquid carrier, specifically fatty acids ([0038]). However, Rayborn only broadly discloses the fatty acids. Makino teaches that fatty acids having from 12 to 24 carbon atoms, specifically oleic acid, linoleic acid, and linolenic acid, are commonly utilized in lubricating compositions (column 2, lines 30-57). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for Rayborn to utilize oleic acid, linoleic acid, or linolenic as the liquid carrier.

4. Specifically, applicant argues (D) that Rayborn does not disclose small amounts of the instantly claimed impurities since Rayborn discloses liquid carriers comprising significant amounts of saturated fatty acids.

With respect to argument (D), Rayborn teaches that the liquid carrier is selected from the list disclosed in paragraphs [0018] and [0038]. Therefore, Rayborn teaches the use of only one liquid carrier so that when utilizing the fatty acids of Makino or Malchow, no saturated fatty acids are utilized.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claim 1** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 now recites a triglyceride having "one or more fatty acids, each fatty acid having from 16 to 26 carbon atoms." However, it is the examiner's position that the instant specification does not support this limitation. The instant specification only recites wherein the triglyceride has from 16 to 26 carbon atoms (see [0021], [0050]), not where each fatty acid of the triglyceride has from 16 to 26 carbon atoms.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 1, 6, 9, and 11-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rayborn (US 2004/0138067 A1) in view of Malchow (US 5,807,811), Adams (US 5,700,767), and Albright (US 6,451,953 B1).

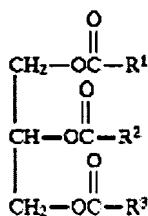
Rayborn discloses a lubricant composition that is utilized as an additive to a drilling fluid ([0012]). The composition is comprised of a carrier fluid, graphite, and additives ([0012]). The carrier fluid is further disclosed as oil, including vegetable oil, and is present in the lubricating composition from 50 to 98 wt% ([0012], [0013], [0038]). The graphite is present from 2 to 50 wt%, which clearly overlaps the instantly claimed 0.1 to 5 wt% ([0013]). The additives include potassium hydroxide, sodium hydroxide, barium sulfate, and calcium carbonate, which encompass the instantly claimed Group I and Group II metals ([0014]). Additional additives in the composition include copolymer beads of styrene and divinylbenzene with a size between 100 microns to 900 microns ([0036]). These polymeric beads are present in the lubricating composition from 2 to 50 wt% ([0013]).

Additionally, Rayborn discloses a method to lubricate a wellbore wherein the disclosed lubricant composition is added to a drilling fluid in an amount from 1 to 99 wt% ([0005], [0006], [0021]).

Rayborn does not disclose (i) triglycerides in the composition, (ii) the suspension agent comprising a film forming amine and the total wt % of the suspension agent, (iii) the mesh size of the polymeric beads and the pounds of polymeric beads per barrel of lubricant, (iv) less than 2 wt% of resin acids, unsaponifiables, and saturated fatty acids and free of aromatics, cadmium, and lead.

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With respect to (i) above, although Rayborn does not specifically disclose the composition comprised of triglycerides, Rayborn does disclose vegetable oil. Malchow discloses a naturally occurring triglyceride of the formula:



where R¹, R², and R³ are unsaturated aliphatic groups each containing from 7 to 23 carbon atoms (column 3, lines 1-13). The preferred fatty acids include linoleic acid, oleic acid, linolenic acid, and ricinoleic acid, which clearly overlap the instant claims (column 5, lines 1-8). Therefore, it would have been obvious to one of ordinary skill at the time of the invention for Rayborn to utilize the vegetable oil of Malchow.

With respect to (ii) above, Adams also discloses a lubricating composition additive to a drilling fluid (column 1, lines 7-9). The additive composition comprises a film forming amine known as Arcor 233 in an amount from 20 to 80 wt% (column 2, lines 53-61). The Arcor 233 clearly overlaps the instantly claimed amine as given by the evidence in the instant specification ([0054] of the instant specification). This amine coats the metal surface of the drilling well and also acts as a corrosion inhibitor (column 2, lines 53-61). This is advantageous to a lubricant when applied to a drilling well, since it helps reduce mechanical drag (column 1, lines 49-58). Therefore, since the disclosed Arcor 233 is an advantageous additive to a drilling well lubricant, it would have been obvious for Rayborn to also utilize this additive in the lubricating composition.

The combination of Rayborn and Adams disclose a metal compound and a film forming amine, which comprise the instantly claimed suspension agent, wherein the amine is present from 20 to 80 wt%. Therefore, although Rayborn does not specifically disclose the wt% of metal compound in the lubricant, the total suspension agent is still more than 20 wt% given the disclosed amount of amine by Adams.

With respect to (iii) above, Rayborn discloses the polymeric beads with a size from 100 to 900 microns. Albright discloses that polymeric beads with a size from 250 to 1190 microns correspond to a 16 to 60 mesh (column 7, line 59 through column 8, line 1). Therefore, given the evidence supported by Albright, Rayborn clearly overlaps the instantly claimed range of 40 to 100 mesh.

Since Rayborn only discloses the average polymeric bead size form 100 to 900 microns, it would have been obvious to utilize polymeric beads with 30% less than 150 microns and 5% greater than 350 microns.

Furthermore, Rayborn discloses the polymeric beads in an amount from 2 to 50 wt% of the lubricant composition. Since Rayborn discloses the amount of beads in wt% and the instantly claimed range is given in pounds of beads per barrel of lubricant, given that Rayborn does not give a conversion formula, it is estimated that the amount of beads instantly claimed is equivalent to 3.9 and 19.3 wt%. This conversion is based on the relationship between barrel of oil and lb of oil, namely 1 barrel of oil/day = 0.00129 acre*foot/day; $1 \text{ lb/day} = 4.97 \times 10^{-7}$ acre*foot/day; therefore $1 \text{ barrel oil/day} = 1.29 \times 10^{-4} / 4.97 \times 10^{-7} \text{ lb/day} = 259 \text{ lb/day}$ (Online Unit Converter). Therefore the range of 10 to 50 lb/barrel is determined to be equal to 3.9 to 19.3 wt% by the conversion

10/259*100%=3.9 and 50/259*100%=19.3). Based on the above estimated calculation, it is therefore the examiner's position that the amount of polymeric beads disclosed by Rayborn of 2 to 50 wt% overlaps the instantly claimed range of 3.9 to 19.3 wt%.

With respect to (iv) above, the instantly claimed resin acids, unsaponifiables, saturated fatty acids, aromatics, cadmium, and lead are disclosed in such small amounts so that they correspond to impurities in the composition. Therefore, since Rayborn does not disclose of such impurities in the composition, it would have been obvious to contain less than 2 wt% of the compounds in the lubricating composition disclosed by Rayborn.

10. **Claims 1-9, and 11-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rayborn (US 2004/0138067 A1) in view of Makino (US 4,636,323), Adams (US 5,700,767), and Albright (US 6,451,953 B1).**

Rayborn discloses a lubricant composition that is utilized as an additive to a drilling fluid ([0012]). The composition is comprised of a carrier fluid, graphite, and additives ([0012]). The carrier fluid is further disclosed as fatty acids, and is present in the lubricating composition from 50 to 98 wt% ([0012], [0013], [0038]). The graphite is present from 2 to 50 wt%, which clearly overlaps the instantly claimed 0.1 to 5 wt% ([0013]). The additives include potassium hydroxide, sodium hydroxide, barium sulfate, and calcium carbonate, which encompass the instantly claimed Group I and Group II metals ([0014]). Additional additives in the composition include copolymer beads of styrene and divinylbenzene with a size between 100 microns to 900 microns ([0036]).

These polymeric beads are present in the lubricating composition from 2 to 50 wt% ([0013]).

Additionally, Rayborn discloses a method to lubricate a wellbore wherein the disclosed lubricant composition is added to a drilling fluid in amount from 1 to 99 wt% ([0005], [0006], [0021]).

Rayborn does not disclose (i) the fatty acids as having between 16 and 26 carbon atoms, (ii) the suspension agent comprising a film forming amine and the total wt % of the suspension agent, (iii) the mesh size of the polymeric beads and the pounds of polymeric beads per barrel of lubricant, (iv) less than 2 wt% of resin acids, unsaponifiables, and saturated fatty acids and free of aromatics, cadmium, and lead.

With respect to (i) above, Makino discloses a fatty acid utilized in a lubricating composition having from 12 to 24 carbon atoms (column 2, lines 39-46). Since Rayborn does not disclose a specific fatty acid and Makino teaches it is known in the lubricant art to utilize fatty acids having 12 to 24 carbon atoms, it would have been obvious for Rayborn to also utilize this specific fatty acid.

With respect to (ii) above, Adams also discloses a lubricating composition additive to a drilling fluid (column 1, lines 7-9). The additive composition comprises a film forming amine known as Arcor 233 in an amount from 20 to 80 wt% (column 2, lines 53-61). The Arcor 233 clearly overlaps the instantly claimed amine as given by the evidence in the instant specification ([0054] of the instant specification). This amine coats the metal surface of the drilling well and also acts as a corrosion inhibitor (column 2, lines 53-61). This is advantageous to a lubricant when applied to a drilling well, since

it helps reduce mechanical drag (column 1, lines 49-58). Therefore, since the disclosed Arcor 233 is an advantageous additive to a drilling well lubricant, it would have been obvious for Rayborn to also utilize this additive in the lubricating composition.

The combination of Rayborn and Adams disclose a metal compound and a film forming amine, which comprise the instantly claimed suspension agent, wherein the amine is present from 20 to 80 wt%. Therefore, although Rayborn does not specifically disclose the wt% of metal compound in the lubricant, the total suspension agent is still more than 20 wt% given the disclosed amount of amine by Adams.

With respect to (iii) above, Rayborn discloses the polymeric beads with a size from 100 to 900 microns. Albright discloses that polymeric beads with a size from 250 to 1190 microns correspond to a 16 to 60 mesh (column 7, line 59 through column 8, line 1). Therefore, given the evidence supported by Albright, Rayborn clearly overlaps the instantly claimed range of 40 to 100 mesh.

Since Rayborn only discloses the average polymeric bead size from 100 to 900 microns, it would have been obvious to utilize polymeric beads with 30% less than 150 microns and 5% greater than 350 microns.

Furthermore, Rayborn discloses the polymeric beads in an amount from 2 to 50 wt% of the lubricant composition. Since Rayborn discloses the amount of beads in wt% and the instantly claimed range is given in pounds of beads per barrel of lubricant, given that Rayborn does not give a conversion formula, it is estimated that the amount of beads instantly claimed is equivalent to 3.9 and 19.3 wt%. This conversion is based on the relationship between barrel of oil and lb of oil, namely 1 barrel of oil/day = 0.00129

acre*foot/day; 1 lb/day = 4.97×10^{-7} acre*foot/day; therefore 1 barrel oil/day = $1.29 \times 10^{-4} / 4.97 \times 10^{-7}$ lb/day = 259 lb/day (Online Unit Converter). Therefore the range of 10 to 50 lb/barrel is determined to be equal to 3.9 to 19.3 wt% by the conversion $10/259 \times 100\% = 3.9$ and $50/259 \times 100\% = 19.3$). Based on the above estimated calculation, it is the therefore the examiner's position that the amount of polymeric beads disclosed by Rayborn of 2 to 50 wt% overlaps the instantly claimed range of 3.9 to 19.3 wt%.

With respect to (iv) above, the instantly claimed resin acids, unsaponifiables, saturated fatty acids, aromatics, cadmium, and lead are disclosed in such small amounts so that they correspond to impurities in the composition. Therefore, since Rayborn does not disclose of such impurities in the composition, it would have been obvious to contain less than 2 wt% of the compounds in the lubricating composition disclosed by Rayborn.

11. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Rayborn (US 2004/0138067 A1) in view of Malchow (US 5,807,811) or Makino (US 4,636,323) and Adams (US 5,700,767), Albright (US 6,451,953 B1), and Vinci (US 5,213,697).

The combination of Rayborn, Malchow, Adams, and Albright, as discussed in paragraph 11 and incorporated here by reference, disclose a lubricating additive to a drilling fluid comprised of triglycerides, a metal compound, a film forming amine, and polymeric beads.

The combination of Rayborn, Makino, Adams, and Albright, as discussed in paragraph 12 and incorporated here by reference, disclose a lubricating additive to a

drilling fluid comprised of fatty acids, a metal compound, a film forming amine, and polymeric beads.

Rayborn does not specifically disclose the metal ratio of the calcium carbonate metal compound.

Vinci discloses a calcium carbonate with a metal ratio of 4.5 (column 4, lines 1-20). Therefore, since Rayborn generically discloses a calcium carbonate but is silent as to the metal ratio and Vinci discloses that it is known to have a calcium carbonate with a metal ratio of 4.5, it would have been obvious for Rayborn to utilize this specific calcium carbonate.

12. **Claims 25 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rayborn (US 2004/0138067 A1) in view of Malchow (US 5,807,811) or Makino (US 4,636,323) and Adams (US 5,700,767), Albright (US 6,451,953 B1), and Suman (US 3,756,315).

The combination of Rayborn, Malchow, Adams, and Albright, as discussed in paragraph 11 and incorporated here by reference, disclose a lubricating additive to a drilling fluid comprised of triglycerides, a metal compound, a film forming amine, and polymeric beads.

The combination of Rayborn, Makino, Adams, and Albright, as discussed in paragraph 12 and incorporated here by reference, disclose a lubricating additive to a drilling fluid comprised of fatty acids, a metal compound, a film forming amine, and polymeric beads.

Rayborn does not specifically disclose the drilling fluid as an aqueous oil-based drilling mud.

Suman discloses that drilling fluids encompass aqueous drilling muds (column 7, lines 62-63). Therefore, since Rayborn generically discloses an oil-based drilling fluid and Suman teaches that drilling fluids encompass drilling muds, it would have been obvious for Rayborn to specifically utilize an aqueous oil-based drilling mud.

13. **Claims 22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rayborn (US 2004/0138067 A1) in view of Makino (US 4,636,323), Adams (US 5,700,767), Albright (US 6,451,953 B1), and Hernandez (US 5,883,054).**

The combination of Rayborn, Makino, Adams, and Albright, as discussed in paragraph 12 and incorporated here by reference, disclose a lubricating additive to a drilling fluid comprised of fatty acids, a metal compound, a film forming amine, and polymeric beads. The metal compound disclosed by Rayborn, specifically calcium carbonate, is a weighting agent ([0014]).

Rayborn is silent regarding the wt% of the calcium carbonate metal component.

Hernandez also discloses a drilling fluid comprised of a calcium carbonate weighting agent (column 1, line 4-7; column 2, lines 57-60). The weighting agent is further disclosed in amount of 25 wt% (Table 2, column 4). A sufficient amount of this metal component was added to the composition in order to adjust the density of the drilling fluid (column 3, lines 17-25). Therefore, since an amount of weighting agent of 25 wt% is adequate to properly improve a drilling fluid, it would have been obvious for

Rayborn to also utilize this amount of calcium carbonate. This amount would intrinsically provide at least a 50% overbased composition in the lubricating composition.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Lang whose telephone number is (571) 272-9057. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/29/2007
Amy T. Lang
ATL


ANHTUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER

6/2/07